

ANT+



- 2.4GHz ANT+ Digital Heart Rate Monitoring
- Conductive Fabric Heart Rate Strap
- Acumen's Patented EZ-Set Target Zone with Visual and Audible Alarms
- Interval Timers
- Free / Lap Training (50 Laps)
- Fitness Index
- Calorie Counter
- Backlight with SmartLite
- Water Resistant up to 30 meters



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Introduction to the Product



1.1 Features

- HEART RATE MONITORING (HRM)
 - 2.4 GHZ ANT + Sport Digital HRM
 - Conductive Fabric Chest Belt
 - Current / Average / Maximum HR
 - EZ Set Target Zone with Visual & Audible Alarms
 - Time Above / Within / Below Target Zone
 - In Zone Goal Count Down Timer (5-60 minutes)
 - Average HR Per Lap
- ➢ TRAINING
 - Free Training
 - Lap Training (50 laps)
 - Interval Timers
- FITNESS
 - Fitness Index
 - Programmable Exercise Type
 - Calorie Counter
- STANDARD FEATURES
 - Daily Alarm
 - Clock / Date / Day Display
 - NiteLite with SmartLite
 - Scratch Resistant Crystal Lens
 - Water Resistant to 30 Meters

1.2 Package Contents

A. Ergo Pro Watch

Α

- B. 2.4 GHz ANT+ Conductive Fabric Chest Belt
- C. Instruction Manual





В

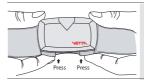
1.3 Chest Belt Installation

Attaching Your Chest Belt

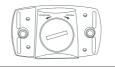
1. Moisten both strips of conductive fabric on the chest belt.
 2. Insert the two pins at the back of the transmitter into the two mounting holes on the Conductive Fabric Chest Belt.
 3. Push the transmitter downwards to lock the transmitter in place. (See the picture on the left).
 4. Check and adjust the tension of the Elastic Strap to ensure that the conductive fabrics fit tightly against your skin.

Note: The watch does not have to be worn on your wrist to register your heart rate, but it must be within 3 feet from your Conductive Fabric Chest Belt.

Battery Replacement



1. Remove the transmitter from the Conductive Fabric Chest Belt.



- 2. Use a coin to open the battery door.
- 3. Replace the used battery with a new battery.

1.4 SYNC Setup

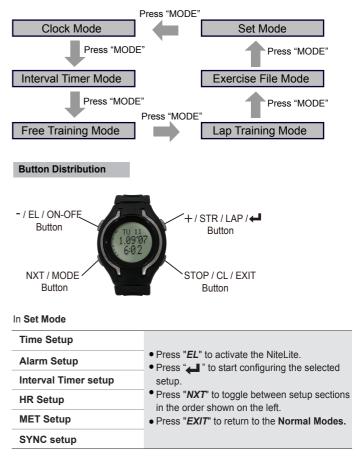
Before you start training, enter **SYNC Setup** under **Set Mode** to synchronize the heart rate chest belt with the watch as described in section 2.6.

Setting up Your Watch



Set Mode

Press the "*NXT*" button in Clock Mode 5 times and then the "**—**" button once to enter Set Mode. Time Setup, Alarm Setup, Interval Timer Setup, HR Setup, MET Setup and SYNC Setup are found within Set Mode.



2.1 Time Setup

Parameters	Press "+ "/ "- "	Press "NXT"	Press "EXIT"
12/24 Format	Set 12 / 24 hour format		
Hour	 Increase/Decrease the 		
Minutes	value		Return to Time Setup.
Year	Press & hold to increase	Advance to	
Month	the speed at which the values adjust	the next parameter	
Date		parameter	
SmartLite	Set the SmartLite to ON / OFF		
SmartLite (From)	 Increase/Decrease the value Press & hold to 		
SmartLite (To)	at which the value		

Note:

- 1. In 12-hour format, Time displayed without the "PM" icon represents "AM".
- SmartLite will turn on the night light for 3 seconds between pre-set intervals when any button is pressed. Set the interval as follows.

2.2 Alarm Setup

Parameters	Press "+ "/ "- "	Press "NXT"	Press "EXIT"
Hour	 Increase/Decrease the value 		
Minutes	 Press & hold to increase the speed at which the value adjusts. 	Advance to the next parameter.	Return to Alarm Setup.
Alarm ON/OFF	Set the Alarm to ON / OFF		

Note: Press & Hold "O" in Clock Mode to set the Alarm (ON/OFF)swiftly.

2.3 Interval Timer Setup

Parameters	Press "+ "/ "- "	Press "NXT "	Press "EXIT"
Timer ON/OFF	Set Interval Timer to ON/OFF		
Number of timers			
Number of cycles for timer1			
Minutes for timer1	 Increase/Decrease the value 		
Seconds for timer1	the value		
Number of cycles for timer2	Press & hold to increase the speed	Advance to next setting	Return to Interval
Minutes for timer2	at which the value adjusts.	item.	Timer Setup.
Seconds for timer2			
Number of cycles for timer3			
Minutes for timer3			
Seconds for timer3			

Note: Press & Hold "O" in Interval Timer Mode to set the Interval Timer (ON/OFF)swiftly.

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2.4 Heart Rate (HR) Setup

Parameters	Press "+ "/ "- "	Press "NXT"	Press "EXIT"
Menu Short/Long	Set short/long Menu		
Unit	Set Unit to Metric or US		
Weight			
Age	 Increase/Decrease the value Press & hold to increase the speed at which the value adjusts 	Advance to the next parameter	Return to HR Setup.
Max HR			
Upper Limit for Target Zone (TZ)			
Lower Limit for Target Zone (TZ)			
In-Zone-Goal Count Down Timer	,		
TZ Alarm ON/OFF	Set TZ Alarm to ON/OFF		

Note: Press & Hold "O " in Free Training & Lap Training Mode to set the TZ Alarm (ON/OFF) swiftly.

2.5 MET Setup

Parameters	Press "+ "/ "- "	Press "NXT"	Press "EXIT"
Exercise Type	Select an Exercise Type or "MET"		
Exercise Intensity	Select exercise intensity (2-15).		
MET Parameter	 Increase / Decrease the MET value Press & hold to increase the speed at which the value adjusts 	Advance to the next parameter.	Return to MET Setup.

- Note: 1. If you select a type of Exercise, press "*NXT*" to return to **MET** Setup after setting the Exercise Intensity.
 - 2. If you select MET in Exercise Type, Press "NXT" to go to MET Setup.

2.6 SYNC Setup

WAIT SET Waiting for Signal	 To quit synchronization, press "EXIT" to return to Set Mode while waiting for a signal.
SYNC D ON E set If SYNC Succeeds	 Returns to Set Mode automatically after 2 seconds.
SYNC RE TR Y?	 Press " Press " Press " EXIT" to return to Set Mode.

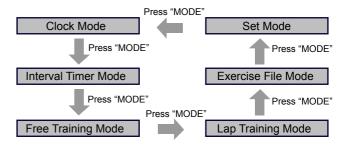
USING YOUR WATCH





Overview

The Normal Modes in **Ergo** can be toggled in the following sequence by pressing "*MODE*".



Button Distribution



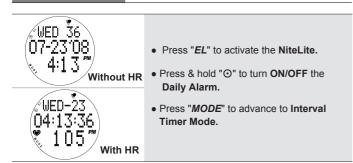
Icons Summary

	Ō	•1))	A.
Heart Rate	Interval Timer	TZ Alarm	Daily Alarm
Current HR	Current HR	Turn on / off Daily Alarm, TZ	
Above TZ	Below TZ	Alarm & Interval Timer	

Beep Summary

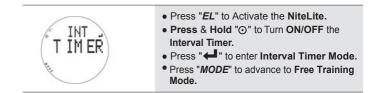
Button	Produces a short beep
SYNC Setup	If SYNC fails, produces a 3-second beep
Daily Alarm	Produces 1-minute of double short beep until a button is pressed to stop it
	Produces 4 double short beeps at the completion of each Interval
Interval Timer	Produces 4 triple short beeps at the completion of each Cycle
	Produces a 3-second beep at the completion of the Final Interval
TZ Alarm	Beeps constantly until HR is back to TZ
TZ Goal Timer	Produces a 3 - second beep when the TZ Goal Time is reached

3.1 Clock Mode



Note: Press & Hold the button corresponding to the icon that is blinking slowly.

3.2 Interval Timer Mode



In Interval Timer Mode, you can view the settings for each of the Timers.

Timer 1	Press " <i>EL</i> " to activate the NiteLite .
Timer 2	 Press & Hold "⊙" to Turn ON/OFF the Interval Timer. Press "<i>NXT</i>" to Advance to next timer. Press "<i>EXIT</i>" to return to Interval Timer Mode.
Timer 3	

Note: All three Timers are turned ON/OFF simultaneously. Set the time of any timer you are not using to zero in Set Mode in order to deactivate any unused timers.

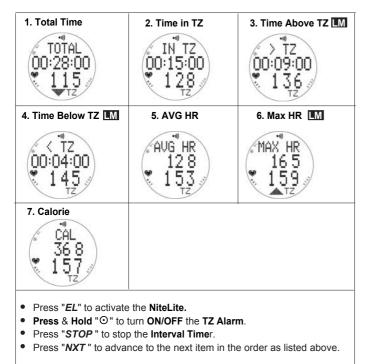
3.3 Free Training Mode

Before you start training, make sure you have synchronized the heart rate chest belt with the watch. Press "*STR* " to start **Free Training Mode** and enter the **Total Time** of **Free Training**.

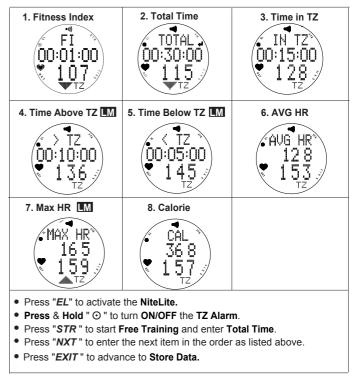


- Press "*EL*" to activate the NiteLite.
 Press & hold "O" to turn ON/OFF the TZ Alarm
 Press "*STR*" to start Free Training and enter Total Time.
- Press "*MODE* " to advance to Lap Training Mode.

While the Interval Timer is running, the following information is available: Information with I (Long Menu) can only be viewed in Long Menu format.



While the Interval Timer stops, the following information is available: Information with I (Long Menu) can only be viewed in Long Menu format.



Note: Fitness Index is used to measure your fitness level by monitoring how

quickly your heart rate slows down in one minute.

The Fitness Index Level and its corresponding grade:

0-20 🗪 Poor	21-40 🖚	Fair	41-60 🗯 OK
61-80 → Good	81-100 🗪	Excellent	

Store Data

- STORE . D AT A?
- Press "EL" to activate the NiteLite.
- Press "EXIT " to exit to Free Training Mode without storing data.

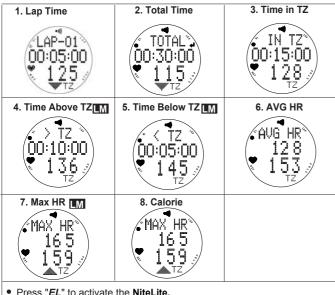
3.4 Lap Training Mode

Before you start training, make sure you have synchronized the heart rate chest belt with the watch. Press "*STR*" to start Lap Training Mode and enter the Lap Time of Lap Training.



- Press "EL" to activate the NiteLite.
- Press & hold " O" to turn ON/OFF the TZ Alarm.
- Press "STR" to start Lap Training and enter Lap Time.
- Press "*MODE* " to advance to Exercise File Mode.

While the Lap Timer is running, the following information is available: Information with I (Long Menu) can only be viewed in Long Menu format.



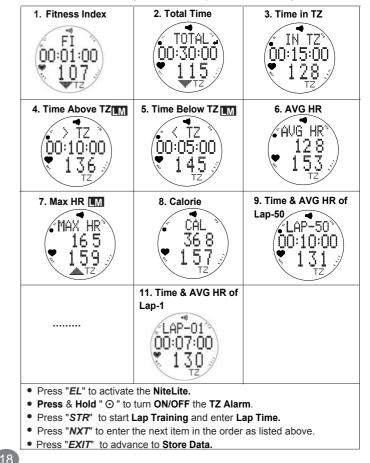
- Press "EL" to activate the NiteLite.
 Press & Hold " O " to turn ON/OFF the TZ Alarm.
- Press "LAP " to start a new lap.
- Press "NXT " to enter the next item in the order as listed above.
- Press "STOP " to stop the Lap Timer.

After press "LAP"

start a new lap

• The screen will freeze for 2 seconds, then return to the previous screen.

While the Lap Timer stops, the following information is available: Information with (Long Menu) can only be viewed in Long Menu format.



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Note: 1. Refer to the Fitness Index in Free Training for more information about the Fitness Index.

2. You can view the time and average ${\sf HR}$ of all the laps from the last lap to the first one.

Store Data

Press "*EL*" to activate the NiteLite.
Press "*L*" to store data and exit to Lap Training Mode.
Press "*EXIT*" to exit to Lap Training Mode without storing data.

3.5 Exercise File Mode



- Press "EL" to activate the NiteLite.
- Press "MODE" to advance to Set Mode.

Important: Ergo can only save one exercise file. An existing file will be overwritten when another file is saved.

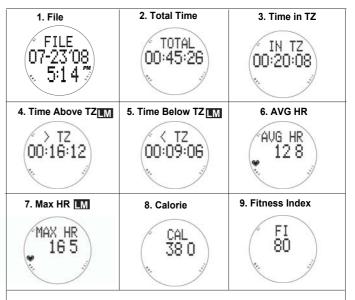
3.6 File Mode (for Free Training)



- Press "*EL*" to activate the NiteLite.
- Press " + " to start viewing the recorded information.
- Press "MODE" to advance to Set Mode.
- Press & hold "CL" to reset the file and return to Exercise File Mode.

Recorded Exercise Information:

Information with LM(Long Menu) can only be viewed in Long Menu format.



- Press "EL" to activate the NiteLite.
- Press "NXT" to scroll through the recorded exercise information.
- Press "EXIT" to return to File Mode for Free Training.

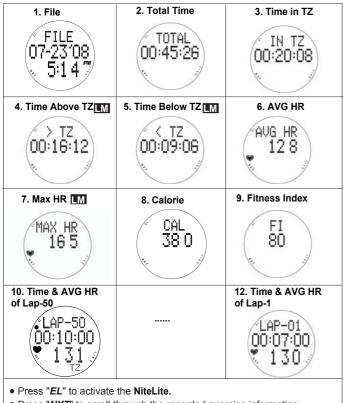
3.7 File Mode (for Lap Training)



- Press "EL" to activate the NiteLite.
- Press " 🗲 " to start viewing the recorded information.
- Press "MODE" to advance to Set Mode.
- Press & hold "CL" to reset the file and return to Exercise File Mode.

Recorded Exercise Information:

Information with LM (Long Menu) can only be viewed in Long Menu format.



- Press "NXT" to scroll through the recorded exercise information.
- Press "*EXIT*" to return to **File Mode** for **Free Training**.

Note: Under all normal modes, if there is no HR or button pushed for 3 minutes, the display will return to Clock Mode.

3.8 Set Mode

Please refer to Setting Up Your Watch in Section 2.

Technical Reference



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4.1 Target Zone & Fitness Training

Determining Your Target Zone

What is Target Zone Heart Rate Training? To benefit the most from your workout, you should become familiar with your heart rate training zone. By exercising within the correct heart rate range, you will achieve your fitness goals and strengthen your cardiovascular system in less time. Here is basically how it works.

Scientific research has shown that effective conditioning requires that you maintain your heart rate at the proper level for at least 20 minutes per workout (or per day). Exercising above your heart rate training zone can be counter-effective. For most people, as your heart rate exceeds 85% of your maximum Heart Rate, which is the upper limit, your body begins to become anaerobic and produces acids. At this stage, your body begins to burn muscle instead of fat. When you have reached the lower limit of you Target Zone Heart Rate Training, effective conditioning can be achieved. A heart monitor will tune you in to your body's internal activity level and helps prevent injury.

The **Ergo** automatically sets the correct Heart Rate Target Limits by using the American Heart Association standard range of 65% to 85% of the calculated maximum Heart Rate based on your age. The maximum HR is calculated based on the equation, max HR = $[207 - (Age \times 0.7)]$.

There are various formulas for calculating Heart Rate Target Zones. In most cases, the formulas provide a range that is the same as or very close to the auto-setting of the **Ergo**. If you prefer to fine-tune or program your own limits, this can also be done in the HR Setting Mode. The internal automatic TZ calculation is based on the following example:

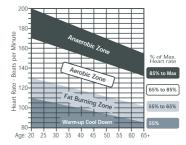
TARGET ZONE CALCULATION FORMULA

207 - Your age x 0.7 = max HR For a 30 year old person, your calculations would be as follows: 207 - 30 x 0.7 = 186 Maximum Heart Rate 65% of this number = 121 85% of this number = 158

The calculated exercise range for a 30-year-old would be a low of 121 beats per minute and a high of 158 beats per minute. You should never exercise near your maximum heart rate (max HR) for any period of time.

Basic Fitness Target Zone & Tips

Depending on your specific goals, individual fitness level or just on how energetic you feel, you may want to modify your heart rate range from one day to the next based on the following chart:



Stretching

Stretch at the beginning and end of every workout. Stretching before your workout increases flexibility and helps prevent muscle strain or injury. Stretching after your workout loosens tight muscles and helps prevent soreness.

- · Stretch before warm up and after cool down.
- Stretch slowly and gently. Never bounce or stretch to a point of pain.
- Hold each stretch for 30-60 seconds and exhale as you extend into stretches.

Warm Up & Cool Down: 55% or Less of Max. HR

Begin and end every workout with a slow and gradual warm up and cool down. Respectively, Smoothly easing into and out of strenuous activity helps your body prepare your metabolism and blood flow to efficiently break down fat and change from one intensity level to another. Going into your Heart Rate Target Zone too quickly can cause your heart rate to increase too rapidly. Rapid increase of the heart rate could compromise consistent energy levels during a workout.

- Slowly bring your heart rate to a level just below the lower limit of your Heart Rate Target Zone.
- · Maintain your heart rate at this level for 5 to 10 minutes.

The Fat Burning Zone: 55%-65% of Max.HR

The Fat Burning Zone is recommended for those who are not in adequate physical shape. This is the ideal zone for those who are beginning to exercise regularly, would like to loose weight and are at high risk for heart problems. It is intended for low intensity and/or long duration exercise. Exercising at a lower intensity allows for a longer, continuous exercising period. For weight loss and new exercise programs, longer, continuous, low intensity workouts are safer and more beneficial. Slow and steady wins the race!

- Duration: Build up gradually to 30 to 60 minutes per workout.
- Frequency: Workout 3 or 4 times per week.

The Aerobic Zone: 65%-85% of Max. HR

The Aerobic Zone is recommended for those in good physical condition who have been exercising on a consistent basis for an extended period of time. Exercising at this range helps improve your fitness level and prevent injury

from excessive training.

• Duration: 20 to 30 minutes per workout.

• Frequency: At least 3 or 4 times per week.

The Anaerobic Zone: 85% to Max HR

The Anaerobic Zone is ONLY recommended for professional athletes or those in exception physical condition. This zone can also be used for interval training (high intensity for short durations) to help enhance overall strength and endurance.

Monitor your Progress

Heart rate fluctuations during physical activity can be tracked and documented to determine overall health and fitness progress. As the cardiovascular system becomes stronger, the resting heart rate will decrease. It will require more intensive physical activity to reach the target zone and less time for the heart rate to recover.

Higher than usual resting heart rate and slower than usual heart rate recovery could be an indication of strain of the heart from strenuous exercise or dehydration. Resting for a day, lower intensity exercising, and replenishing the body with fluids are advised. If your heart rate activity does not return to normal, please consult a doctor.

4.2 Determining Your MET Paraneter

If a specific activity is not available in your watch, choose a similar exercise type and use the corresponding parameter from the table below to set your watch.

Table of MET Parameter

	Intensity Level		
Exercise	Light	Medium	High
AEROBICS	6	7,8	9
BASKERBALL	7	8,9	10-12
BOWLING	2	3	4
CYCLING	3 - 5	6 - 8	9,10
DANCING	3	4 - 6	7,8
FOOTBALL	6,7	8	9,10
GOLF	4,5	6	7
HIKING	3 - 5	5 - 8	9-11
JUMPING ROPE	8	9,10	11,12

Exercise	Intensity Level		
	Light	Medium	High
JOGGING	8	10	12
RUNNING	8 - 10	11 - 15	16,17
SKATING (ice/inline)	5	6,7	8,9
SKIING	6,7	8 - 10	11,12
SKIING (Cross-Country)	5	6,7	8
SWIMMING	4	5 - 7	8-10
STAIRS	4	5,6	7,8
TENNIS	4,5	6,7	8,9
VOLLEYBALL	3	4,5	6
WALKING	3	4 - 6	7

4.3 Specifications

Shock Resistant

Standard shock resistance.

- Water Resistant
 98 feet (or 30 meters). Not intended for diving.
- Operating Temperature 32 °F to 122 °F (0 °C to 50 °C)
- Heart Rate Range
- 20~240 BPM
- Heart Rate Transmitter/Receiver Distance 0~34 inches
- Battery Type
 Heart Rate Chest Belt : CR2032 Watch: Lithium CR2032

4.4 Technical Display Guide

Display Items	Default Setting	Range
Time	12:00:00 AM	12/24 hr. Clock
Time Alarm	off,12:00 AM	ON/OFF
Date	01/01/2000	To 12/31/2099
Age	30	7~99
Unit	Metric	Metric/US
Weight(KG/Lbs)	75.0 KG/150 Lbs	30~250KG/50~500 Lbs
In-Zone-Goal Count Down Timer	OFF	OFF, 5~60 minutes
Heart Rate Display		20~240 bpm
Upper Target Zone Limit	162 BPM	OFF, 20~240 bpm
Lower Target Zone Limit	124 BPM	OFF, 20~240 bpm
TZ Alarm	OFF	ON/OFF
MET Parameter	5	2-20
Exercise Type	Aerobics	19 Exercise Types
Calorie Display	0	0~9999 Kcal (rolls over at 10,000)
SmartLite	OFF	ON/OFF

Precautions, Warranty, Service & Repair



Repair Š Service Precautions, Warranty,

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5.1General Precautions

· Do not operate buttons under water

Although your monitor is water resistant, be sure that you do not operate the buttons under water as pressure can cause them to leak.

Dry off watch after use

Moisture can affect the Temperature and Heat Index reading. Please dry off your watch after use.

· Dry off transmitter after use

The transmitter will automatically shut itself off once you have removed it from your chest. However, it is important to thoroughly dry it off after every use since moisture on the conductive fabric can cause it to remain on longer.

Global Reset

If your monitor should ever get stuck or act erratically due to dropping it, static shock or some other unforeseen reason, the Global Reset feature will allow you to reset the unit and return all settings back to their internal defaults. To perform this function, **Press and Hold** all four buttons together for 3 seconds under any mode (display all LCD). The unit will automatically reset and return to initial setting mode.

Caution: Global Reset will RESET ALL FUNCTIONS BACK TO ORIGINAL FACTORY SETTINGS including your Personal Settings.

Battery Replacement

The Ergo HRM uses a Lithium CR2032 battery.

To maintain the watch's water resistance, professional battery replacement service is advised. Improper battery replacement or service will void the warranty. In the case of self replacement, removal of the old battery should be documented in detail to ensure proper replacement of the new battery, position of contacts, and O-ring line-up. It is a good idea to smear a small drop of silicone lubricant spray on the O-ring.

5.2 Warranty

This product is warranted by **Acumen Inc.** for one year from the date of purchase (with the exception of batteries and elastic chest strap) against defects in workmanship and material. During this one-year period, these defects will be repaired or the product will be replaced by **Acumen Inc.** at its sole discretion without charge. This warranty covers normal consumer usage and does not cover damage which occurs in shipment or failure which results from accident, misuse, abuse, tampering, alteration or disassembling of the product or improper maintenance. This warranty is effective only if the product is purchased and operated in the USA and does not extend to any units which have been used

in violation of written instructions furnished by Acumen Inc. or to units which have been altered or modified without authorization of Acumen Inc., or to damage to products or parts thereof which have had the serial number removed, altered, defected or rendered illegible. The product must be returned to an authorized dealer for service if purchased outside of the USA.

Note: Please return the product to local authorized dealer for service if purchased outside of the USA.

4.3 Service and repair

Do not attempt to repair your product. Should the product malfunction, please visit our website at www.acumeninc.com for Consumer Customer Service. If the problem cannot be resolved, return the product to the factory for repair. Under no circumstances should you attempt to open the housing and repair the product. Should you do this, your warranty will be voided.

In USA, securely package and return the product pre-paid to:

Acumen Inc., 101 A Executive Dr., Suite 100, Sterling, VA 20166 USA.

To Return for Service

- a. First visit our website at www.acumeninc.com/returnauthorization.asp to obtain a Return Authorization Number.
- b. Enclose your name, address and phone number.
- c. Enclose the date of purchase (or receipt as a gift).
- d. A description of the malfunction or reason to return.
- e. Seven dollars and fifty cents (\$7.50) Check or Money Order payable to Acumen Inc. for return postage and handling.
- f. To insure prompt "In warranty" service, be sure to include proof of date of purchase.

We recommend you take the necessary precaution of insuring the parcel.

Outside USA, you should contact the local dealer or Acumen distributor in your country for customer service.

Acumen Europe BV E-Mail:acumen@Acumeninc.com Website: www.acumeninc.com



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